

In the specification:

Please replace paragraph 1 under the heading "Related Application Data" on page 1 to read as follows:

This ~~application~~ is a ~~divisional~~ division of copending U.S. Patent Application Serial No. 09/351,106, filed July 6, 1999, now U.S. Patent No. 6,319,757, ~~to issue~~ issued November 20, 2001, which claims priority from U.S. Provisional Application Serial No. 60/092,039, filed July 8, 1998.

Please replace first full paragraph, page 8, as follows:

The stable encapsulating layer is preferably formed by rapidly ~~vamping~~ ramping the temperature of the assembly up to about 700°C. Any metallic circuitry located on the silicon carbide-containing layer or the ceramic substrate is protected against the effects of substantial oxidization/reduction thereof by formation of the stable encapsulating layer. Also, the SiC device bonded to the AlN substrate will be protected against the effects of thermal shock temperature changes from ambient down to -200°C, and up to at least about 1100°C, by the stable encapsulating layer. Preferably, the coefficient of thermal expansion of the stable encapsulating layer is near the coefficient of thermal expansion of the carbide-containing semiconductor substrate. The carbide-containing semiconductor substrate preferably comprises contacts of WC and TiC, and/or Os, with conductors formed of any one of W, Au, Pd, Pt/Au.

Please replace first full paragraph, page 14, as follows:

The surfaces to be bonded (at least one of them coated with the dried adhesive) were placed together, and shift pressure was applied. The process is thermally activated by transferring the assembly from ambient air to an oven preheated to a range of 700°C to 800°C. This step vamped the temperature of the assembly up quickly (a few seconds at most), from ambient to over 700°C. Reaction can be activated at temperatures as low as 600°C for unreacted constituent powders, to temperatures above 1000°C for already reacted powders. Using a fast temperature ~~vamp~~ ramp allows this reaction to be done in ambient air. The BSG reacts and protects metals before they can oxidize. Longer thermal reaction processes can be used if done in an oxygen free atmosphere.

Please replace second full paragraph of EXAMPLE 2 on page 15 as follows:

Referring now to FIG. 2, a portion of a tungsten (W) wire 70, which oxidizes easily, was connected to a metal bond pad 52 on an ohmic contact on the SiC chip and to the metal bond pad 72 on the AlN substrate. The assembly 50 as well as the wire 70 and pads 52, 72 were then encapsulated within an encapsulating layer 80, on the AlN die 30, following the temperature ~~vamping~~ ramping procedure described in Example 1. Then the encapsulated assembly was heated to 1200°C in air for 30 minutes. As a control, a portion of the tungsten wire 70 was not encapsulated by encapsulating layer 80. In general, elemental tungsten forms two types of oxides WO₂ (purple) and WO₃ (yellow). The result of this experiment was as follows: (1) the exposed portion of the tungsten wire 20 was oxidized and formed a yellow, non-conductive powder (WO₃), (2) the encapsulated portion of the tungsten wire 20 remained grayish-silver (elemental, apparently unoxidized W) and its conductivity remained unchanged, no apparent reaction occurred between the tungsten wire 70 and either the encapsulating layer 80 on atmospheric oxygen.